

forming a second electrode layer on the n-layer,

wherein the i-layer is formed by a plasma CVD method employing plasma discharge caused by application of a pulse-modulated high frequency voltage having a pulse ON time of not longer than 50  $\mu$ sec and a duty ratio of not higher than 50% to improve a photo-electric conversion efficiency of the solar cell.

2. (Unamended) A solar cell production method as set forth in claim 1, wherein the pulse ON time is not longer than 10 $\mu$ sec and the duty ratio is not higher than 20%.

Please add the following new claims:

6. (New) A method of making a solar cell, the method comprising:  
forming a first electrode layer so as to be supported by a substrate,  
forming a p-layer, an i-layer and an n-layer comprising amorphous silicon over the first electrode layer, and  
thereafter forming a second electrode layer,  
wherein the i-layer is formed by a plasma CVD method comprising employing plasma discharge caused by application of a pulse-modulated high frequency voltage having a pulse ON time of not longer than 50 $\mu$ sec to improve a photo-electric conversion efficiency of the solar cell.

7. (New) The method of claim 6, wherein the pulse ON time is not longer than 10psec, and a duty ratio of the pulse-modulated high frequency voltage is not higher than 20%.

8. (New) The method of claim 6, wherein a duty ratio of the pulse-modulated high frequency voltage is not higher than 50%.

### **REMARKS**

This is in response to the Office Action dated November 4, 2002. New claims 6-8 have been added. Thus, claims 1-2 and 6-8 are now pending. Attached hereto is a marked-up version of the changes made to the claim(s) by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

Applicant appreciates the courtesy extended by the Examiner during the personal interview held at the USPTO on January 31, 2003. During the interview, the Examiner agreed that claim 1 defines over the art of record.

For purposes of example, and without limitation, certain example embodiments of this invention relate to a method of making a solar cell including a p-i-n layer stack between at least pair of electrodes. For example, see Fig. 3 of the instant application which illustrates a-Si p-layer 23, a-Si i-layer 24, and a-Si n-layer 25 on substrate 21, and sandwiched between electrodes 22 and 26, 27. The i-layer is formed using a particular plasma CVD technique using application of a pulse-modulated high frequency voltage.